

Work Order ID 84516

May-15-12 10:39:18 AM

\*84516\*

Page 1

Item ID: D3391-013

Accept

\*N9000040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Mid Tube Assembly

Start Date: 15/05/2012 Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 06/06/2012 Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals:

Process Plan: MLJ

Date: 12/05/15

Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D3391

I

1001

\*100\*

Skidtubes

Skidtubes

Skidtubes

0.00

Memo

0.00

1-Cut tube to finish length as per Dwg D3391

2-Identify as D3391-013

3-Drill pilot holes using DT8796 (including "B" holes) and drill only 1 fwd saddle hole on one side only as per Dwg D3391

4-Open saddles and GHW holes to Ø0.375" except for fwd saddle hole of detail "J"

5-Remove .030" from Fwd indexing Ridge as per Dwg D3391

6-Remove indexing ridge on Fwd & Aft end of skidtube as per Dwg D3391

7-Deburr

8-Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.250" holes with paint marker,

9-Open wearplate holes of D3391-013 assembly detail section G-G to Ø0.250" (14 holes) as per Dwg D3391 and 2 holes in section Detail "J", do not open wearplate holes of section "J"

10-Open wearplate holes of D3391-013 assembly detail section H-H to Ø0.297" (20 holes) as per Dwg D3391

OC 12/08/29

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 84516

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Item ID: D3391-013 Accept **\*N9000040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Mid Tube Assembly  
 Start Date: 15/05/2012 Start Qty: 1.00 **\*1\*** Cust Item ID:  
 Required Date: 06/06/2012 Req'd Qty: 1.00 **\*1\*** Customer:  
 Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start **\*NR1\***  
 QC: Date: SPC (Y/N): Date: Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
	11-Open .375" holes to .438" ***do not open fwd saddle holes***								
	12- Locate electric step holes at 39.6875" from fwd end and drill using DT 9612								
	13- Locate D3391-021 in D3391-023 at 9.00" (see view z-z)								
	14- Transfer drill one fwd saddle hole only to .188" dia, transfer drill all remaining fwd saddle holes using DT 8149 locating from previously drill .188" dia hole, using t-pins and clicos to ensure perfect allignment, open up previously tranfer drilled pilot holes in D3391-013/-011 to 0.438" dia. in D3391-011								
	15- Transfer drill 2 wearplate holes into D3391-011 using DT8217, locating from two previously drilled holes, drill remaining wearplate holes into D3391-011								
	16- Locating from two fwd wearplate holes drill remaining 6 wearplate holes in D3391-011 using DT8937								
	17- Open 2 fwd wearplate holes in D3391-013 to .250" dia.								
	18- counterbore two aft wearplate holes in D3391-011 as per dwg								
	19- Open 12 wearplate holes in D3391-011 to 0.297" dia								
	20- Deburr and blow out all chips from inside tube								

DC 12/08/29

DC 12/10/18

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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# Work Order ID 84516

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May-15-12 10:39:18 AM

Item ID: D3391-013  
Revision ID:  
Item Name: Mid Tube Assembly

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Stop **\*NS2\***

Start Date: 15/05/2012 Start Qty: 1.00 **\*1\***

Cust Item ID:

Required Date: 06/06/2012 Req'd Qty: 1.00 **\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110 <b>*110*</b> QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00  0.00							
120 <b>*120*</b> HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1  Memo	0.00  0.00							
130 <b>*130*</b> QC Quality Control	QC3- Inspect Part Finish  Memo	0.00  0.00							

**DAS**  
**16**  
**3-5**

*holes*

*1 26 121019*

*① SAD B-10-22*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Item ID: D3391-013  
Revision ID:  
Item Name: Mid Tube Assembly

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Stop **\*NS2\***

Start Date: 15/05/2012 Start Qty: 1.00  
Required Date: 06/06/2012 Req'd Qty: 1.00

**\*1\***

**\*1\***

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140		0.00							
<b>*140*</b>	Skidtubes								
Skidtubes	Memo	0.00							
Skidtubes	1- Open holes to finish size as per dwg.								
	2- Prepare for welding								
	3- Bond web in place as per Dwg D3391 & QSI 015.								
	*****Ensure Web Alignment*****								
	A/R Sikaflex Batch: <u>M123025</u>								
	Exp. date: <u>13-06-22</u>								
150	QC5- Inspect part completeness to step on W/O	0.00							
<b>*150*</b>									
QC	Memo	0.00							
Quality Control	Inspect each insert using DT8821								

1 0 CF 12-10-22

1 0 12-10-24 18

DAS  
18  
8-89

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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May-15-12 10:39:18 AM

Item ID: D3391-013 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Mid Tube Assembly  
 Start Date: 15/05/2012 Start Qty: 1.00 **\*1\*** Cust Item ID:  
 Required Date: 06/06/2012 Req'd Qty: 1.00 **\*1\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160

**\*160\***

Skidtubes

Skidtubes

Skidtubes

Memo

1-Weld crossbolt spacer as per dwg D3391 & QSI 004  
 A/R ALUM Batch: M122357

2-grind weld flush

3- Transfer drill electric step pilot holes only from D3391-013 into D3391-015

4- Open electric step holes 0.391" per dwg D3391 (section L-L)

5- Open electric step holes 0.297" per dwg D3391 (section M-M)

6- Open electric step holes 0.250" per dwg D3391 (section LL-LL)

170

**\*170\***

QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

Memo

0.00

0.00

DA  
15  
22

BB 12-10-24  
 12/10/24

DC 12/10/29

12/10/30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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**NOTE:** Date & initial all entries

Work Order ID 84516

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May-15-12 10:39:18 AM

Item ID: D3391-013 Accept \*N900040100\* Setup Start \*NS1\*  
 Revision ID: Stop \*NS2\*  
 Item Name: Mid Tube Assembly  
 Start Date: 15/05/2012 Start Qty: 1.00 \*1\* Cust Item ID:  
 Required Date: 06/06/2012 Req'd Qty: 1.00 \*1\* Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start \*NR1\*  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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180 QC5- Inspect part completeness to step on W/O 0.00

\*180\*

QC

Memo

Quality Control

185 Pressure Wash per QSI005 4.3 0.00

\*185\*

HandFinish

Memo

Hand Finishing

AND REALODINE AS PER PAR09-043

190 White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum 0.00

\*190\*

Powdercoat

Memo

Powder Coating

\*\*\*Use paint screws to mask inserts.\*\*\*

START TIME: 11:30

OVEN TEMPERATURE: 3200F

FINISH TIME: 11:30

m122878

DAS 10 12/10/30

1 7/16 12-10-30

1X 12/10/30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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# Work Order ID 84516

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May-15-12 10:39:18 AM

Item ID: D3391-013 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Mid Tube Assembly  
 Start Date: 15/05/2012 Start Qty: 1.00 **\*1\*** Cust Item ID:  
 Required Date: 06/06/2012 Req'd Qty: 1.00 **\*1\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200 <b>*200*</b> QC Quality Control	QC3- Inspect Part Finish  Memo	0.00  0.00							<u>1x</u> <u>q</u> <u>HL</u> <u>12/10/30</u>
210 <b>*210*</b> Skidtubes Skidtubes	Skidtubes Memo 1- insert D3391-011 into D3391-13 2- insert T-pins into first and third fwd saddle holes 3- ON FIRST SIDE ONLY drill out 2nd and forth fwd saddles holes to 0.500" as per DSI 9364 4- remove T-pins and locate DT9415 from first and third crossbolt hole using T-pins and clekos 5- ON 2ND SIDE ONLY ream out 2nd and forth saddle hole to 0.499". Remove DT9415 6- deburr, re-alodine and blow out chips 7- press fit D3591-1 spacers using DT9416 starting from 0.500" side	0.00  0.00							<u>1x</u> <u>q</u> <u>HL</u> <u>12/10/30</u>

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**\*84516\***

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**\*N900040100\***

Setup Start \*NS1\*  
Stop \*NS2\*

**Cust Item ID:**  
**Customer:**

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
**QC:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **SPC (Y/N):** \_\_\_\_\_ **Date:** \_\_\_\_\_

```
Run      Start  *NR1*
          Stop   *NR2*
```

[illegible]

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

**Work Order ID 84516****\*84516\***

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May-15-12 10:39:18 AM

Item ID: D3391-013      Accept      **\*N900040100\***      Setup    Start    **\*NS1\***  
Revision ID:      Stop    **\*NS2\***  
Item Name: Mid Tube Assembly  
Start Date: 15/05/2012    Start Qty: 1.00      **\*1\***      Cust Item ID:  
Required Date: 06/06/2012    Req'd Qty: 1.00      **\*1\***      Customer:  
Reference:

Approvals:    Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_      Run    Start    **\*NR1\***  
                 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_      Stop    **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
280	QC21- Final Inspection - Work Order Release	0.00							
<b>*280*</b>									
QC	Memo	0.00							
Quality Control									

12/10/31 *[Signature]*  
12-10-31

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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**NOTE:** Date & initial all entries

# Picklist Print

May-15-12 10:39:22 AM

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Work Order ID: 84516

**\*84516\***

Parent Item: D3391-013

**\*D3391-013\***

Parent Item Name: Mid Tube Assembly

Start Date: 15/05/2012

Required Date: 06/06/2012

Start Qty: 1.00

Required Qty: 1.00

## Comments:

IPP A05.12.13New IssueEC  
 IPP B06.02.09Dwg rev.D EC  
 IPP Rev:06-03-28 Update Manufacturing Instructions JLM  
 IPP rev D 07.03.14 dwg Rev F EC  
 IPP Rev:E ECN 1056 07-11-13 DD verified by: EC  
 IPP Rev:F 08-07-28 chg 0.332" to 0.391" dim. hole in comment DD verified by:EC  
 IPP Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC  
 IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC IPP rev J  
 10.03.30 revised process, added D3391-015 to pick list EC verified : DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

AN960C10L	<u>NAS1149C0332</u>	Purchased	No				Each	0.0000		4			
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**\*AN960C10L \*** ✓

washer

D3672-1

Manufactured No

Each 1,214.000

**\*D3672-1\***

Phenolic Washer

## Location

## Loc Qty

## Loc Code

ST060

1214

1385222

xJ

72229

4

76277

210

80369

500

83608

500

D2500-1-100

Manufactured No

100

Each

85.0000

1

**\*D2500-1-100\***

Skidtube Extrusion

\*\*

12/05/29

## Location

## Loc Qty

## Loc Code

HALL

85

50251

12

82373

73

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

# Picklist Print

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Work Order ID: 84516

**\*84516\***

Parent Item: D3391-013

**\*D3391-013\***

Parent Item Name: Mid Tube Assembly

Start Date: 15/05/2012

Required Date: 06/06/2012

Start Qty: 1.00

Required Qty: 1.00

MS27039C4-08

Purchased

No

100

Each

98.0000

4

4

**\*MS27039C4-08\***

SCREW

\*\*

44 12/10/30

Location

Loc Qty

Loc Code

FP002

7

M122141

44

17831

7

ST293

91

114721

91

D3391-011

Manufactured

No

140

Each

0.0000

1

1

**\*D3391-011\***

Fwd Tube Assembly

B87431

\*\*

1 DC 12/10/18

D3391-015

Manufactured

No

160

Each

0.0000

1

1

**\*D3391-015\***

Aft Tube Assembly

B87600

\*\*

1 DC 12/10/18

D3681-1

Manufactured

No

160

Each

87.0000

12

12

**\*D3681-1\***

Spacer

\*\*

BE12-10-24  
B87611 x12

Location

Loc Qty

Loc Code

LG

77

80361

1

84053

76

LG001

10

68958

2

69893

2

71845

2

74874

1

76004

1

77501

2

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Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

May-15-12 10:39:22 AM

Work Order ID: 84516

**\*84516\***

Parent Item: D3391-013

**\*D3391-013\***

Parent Item Name: Mid Tube Assembly

Start Date: 15/05/2012

Required Date: 06/06/2012

Start Qty: 1.00

Required Qty: 1.00

D3389-1 Manufactured No

210 Each 6.0000 1 1

**\*D3389-1\***

Web

\*\*

1 CF 12.10.22

Location

Loc Qty

Loc Code

LG

6

82389

2

83848

4

ALS4-1032-225

Purchased No

230 Each 904.0000 10 10

**\*AI S4-1032-225\***

Insert

\*\*

WLA W

Location

Loc Qty

Loc Code

ST281

881

108696

146

110768

62

118386

55

118966

68

121269

550

ST282

23

120410

10

120451

13

ALS4-428-165

Purchased No

230 Each 453.0000 4 4

**\*AI S4-428-165\***

Inserts

\*\*

W 11/10/30

Location

Loc Qty

Loc Code

FP002

453

114172

18

117769

435

x4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

May-15-12 10:39:22 AM

Page 4

Work Order ID: 84516

**\*84516\***

Parent Item: D3391-013

**\*D3391-013\***

Parent Item Name: Mid Tube Assembly

Start Date: 15/05/2012

Required Date: 06/06/2012

Start Qty: 1.00

Required Qty: 1.00

D3591-1 Manufactured No

230 Each 104.0000 2 2

**\*D3591-1\***

Bushing

\*\*

HL 11/10/30

Location

Loc Qty

Loc Code

FP

5

80377

4

82027

1

ST055

99

57350

1

83237

98

XZ

ALS4-1032-130

Purchased No

250 Each 3,301.000 26 26

**\*AI S4-1032-130\***

Insert

\*\*

HL 11/10/30

Location

Loc Qty

Loc Code

ST280

205

119084

116

120671

89

ST281

174

120807

36

120837

138

ST282

2922

121269

2922

B122763

XZ

AN3C4A

Purchased No

250 Each 1,969.000 10 10

**\*AN3C4A\***

BOLT

\*\*

N/A h

Location

Loc Qty

Loc Code

ST350

1969

120187

63

120521

28

120769

38

121205

1000

121556

840

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Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

May-15-12 10:39:22 AM

Work Order ID: 84516

**\*84516\***

Parent Item: D3391-013

**\*D3391-013\***

Parent Item Name: Mid Tube Assembly

Start Date: 15/05/2012

Required Date: 06/06/2012

Start Qty: 1.00

Required Qty: 1.00

AN960C10L NAS1149C0332 Purchased No

250 Each 0.0000 10 10

**\*AN960C10I \***

washer

\*\*

N/A

h

AN960C416L

Purchased No

250 Each 0.0000 4 4

**\*AN960C416I \***

WASHER

\*\*

(v4)

h

u10130

D3401-041

Manufactured No

250 Each 13.0000 1 1

**\*D3401-041\***

Tow Cap Assembly

\*\*

N/A

h

## Location

## Loc Qty

## Loc Code

FP002

13

78990

1

82302

12

D3564-13

Manufactured No

250 Each 30.0000 1 1

**\*D3564-13\***

Wearshoe

\*\*

N/A

h

## Location

## Loc Qty

## Loc Code

FP001

1

71594

1

FP002

29

80342

7

82249

22

D3566-13

Manufactured No

250 Each 19.0000 1 1

**\*D3566-13\***

Gasket

\*\*

N/A

h

## Location

## Loc Qty

## Loc Code

FP

12

83351

12

FP002

7

76947

7

May-15-12 10:39:22 AM

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

May-15-12 10:39:22 AM

Page 6

Work Order ID: 84516

**\*84516\***

Parent Item: D3391-013

**\*D3391-013\***

Parent Item Name: Mid Tube Assembly

Start Date: 15/05/2012

Required Date: 06/06/2012

Start Qty: 1.00

Required Qty: 1.00

D3672-1 Manufactured No

250 Each 1,214.000 4 4

**\*D3672-1\***

Phenolic Washer

\*\*

*WLD*

Location

Loc Qty

Loc Code

ST060

1214

72229

4

76277

210

80369

500

83608

500

D3672-3 Manufactured No

250 Each 5.0000 4 4

**\*D3672-3\***

Phenolic Washer

\*\*

*WLD 12/10/30*

Location

Loc Qty

Loc Code

ST060

5

83238

5

*38-1432*

*x4*

MS27039C1-09 Purchased No

250 Each 121.0000 4 4

**\*MS27039C1-09\***

SCREW

\*\*

*WLD 12/10/30*

Location

Loc Qty

Loc Code

FP002

28

17831

28

ST293

93

116290

93

*x4*

May-15-12 10:39:22 AM

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Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

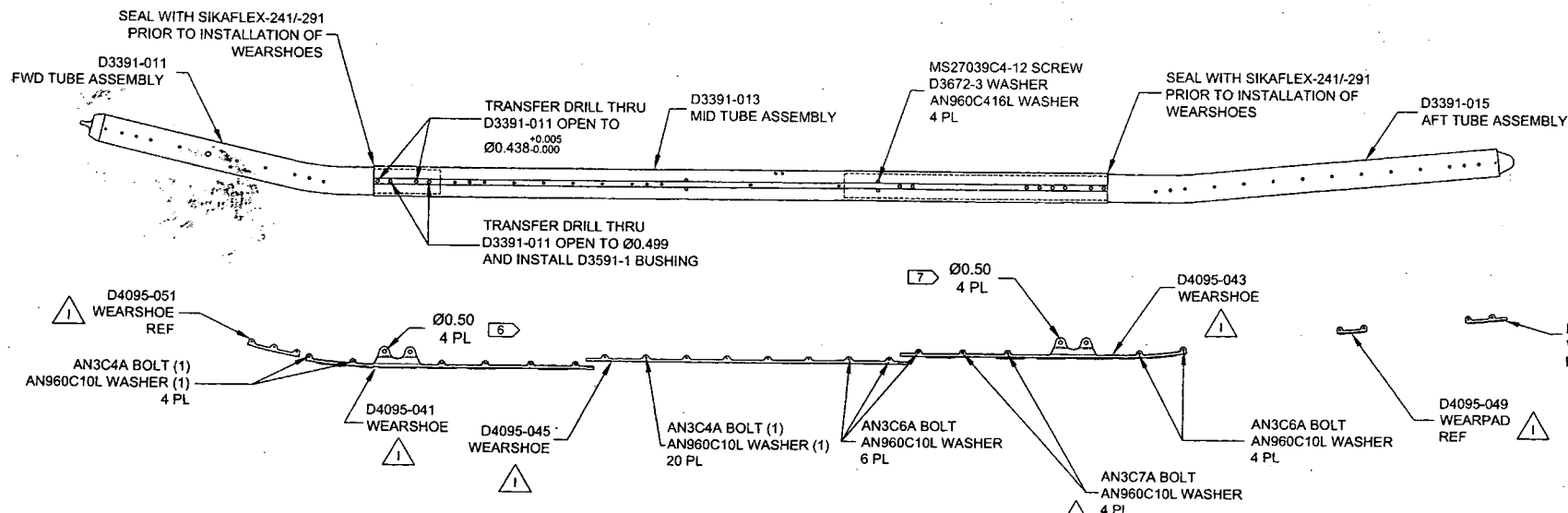
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





**D3391-041 ASSEMBLY**

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RETURN TO  
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UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER

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2011-11-04  
ECN# 11-662

**D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST**

QTY	PART NUMBER	DESCRIPTION
X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
1	D3391-011	FWD TUBE ASSEMBLY
1	D3391-013	MID TUBE ASSEMBLY
1	D3391-015	AFT TUBE ASSEMBLY
2	D3591-1	BUSHING
4	D3672-3	WASHER
1	D4095-041	WEARSHOE
1	D4095-043	WEARSHOE
1	D4095-045	WEARSHOE
1	D4095-047	WEARPAD
1	D4095-049	WEARPAD
1	D4095-051	WEARSHOE
24	AN3C4A	BOLT
10	AN3C6A	BOLT
4	AN3C7A	BOLT
38	AN960C10L	WASHER
4	MS27039C4-12	SCREW
4	AN960C416L	WASHER

**GENERAL NOTES**

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.
- 6) FIT D4095-041 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-041
- 7) FIT D4095-043 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH THE APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-043

REV.	DESCRIPTION	BY	DATE
I	REMOVE GASKETS AND REPLACE ALL WEARSHOES; PARTS LIST UPDATE, ZN A8-1, ZN A8-2, ZN A6-4, ZN B6-8; LPS-3 COATING REMOVED FROM NOTE 2, ZN A3-1, ZN A3-2, REMOVED INSERT AELS-1032-130, ZN B6-4, B2-4, C7-8, C3-8; REMOVED HOLES, ZN D6-4 ZN D2-4, ZN D7-8, ZN D3-8	XDF	11.10.13
H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING, ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING, ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
DESIGN	PH	DATE	
DRAWN	XDF	DATE	
CHECKED		DATE	
MFG. APPR.		DATE	
APPROVED		DATE	
DE APPR.		DATE	
DATE	11.10.13	DATE	

**DART AEROSPACE USA, INC**

KENT, WA

DRAWING NO.

D3391

REV. I

SHEET 1 OF 8

TITLE

412 FLOAT SKIDTUBE

SCALE

NTS

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

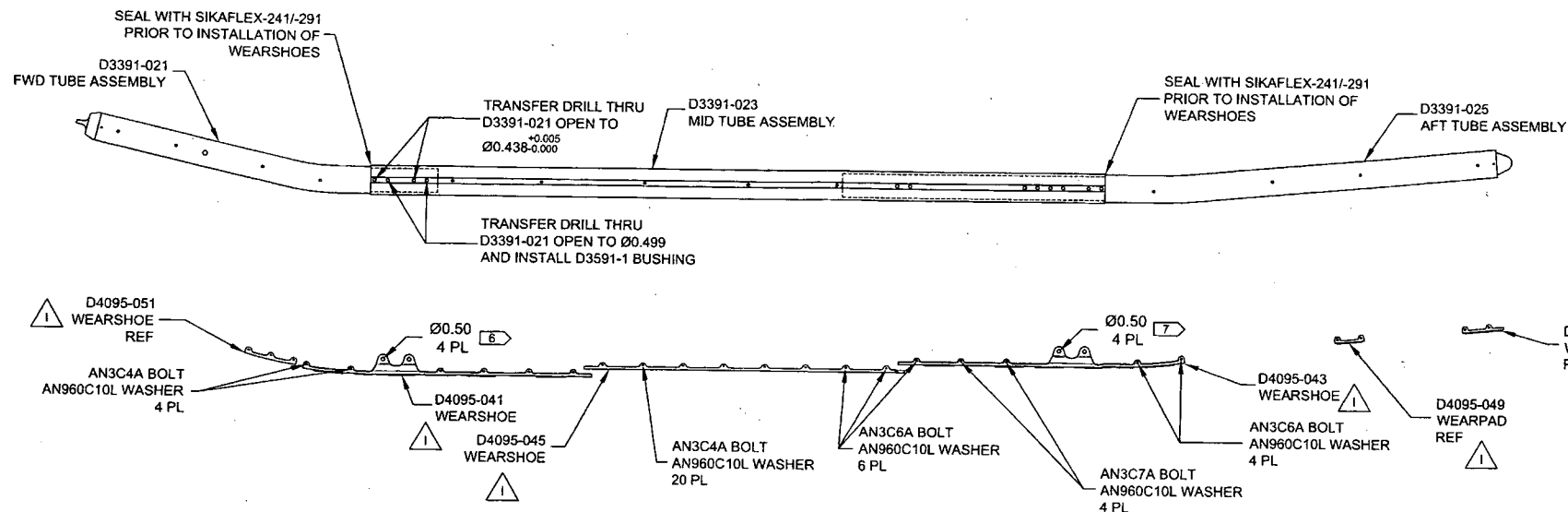
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

24576



# **D3391-043 ASSEMBLY**

## **D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST**

QTY	PART NUMBER	DESCRIPTION
X	D3391-043	FLOAT SKIDTUBE ASSEMBLY
1	D3391-021	FWD TUBE ASSEMBLY
1	D3391-023	MID TUBE ASSEMBLY
1	D3391-025	AFT TUBE ASSEMBLY
2	D3591-1	BUSHING
1	D4095-041	WEARSHOE
1	D4095-043	WEARSHOE
1	D4095-045	WEARSHOE
1	D4095-047	WEARSHOE
1	D4095-049	WEARPAD
1	D4095-051	WEARSHOE
24	AN3C4A	BOLT
10	AN3C6A	BOLT
4	AN3C7A	BOLT
38	AN960C10L	WASHER

## **GENERAL NOTES**

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.
- 6) FIT D4095-041 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-041
- 7) FIT D4095-043 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH THE APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-043

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DRAWN	XDF	KENT, WA	
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MFG. APPR.		D3391	SHEET 2 OF 8
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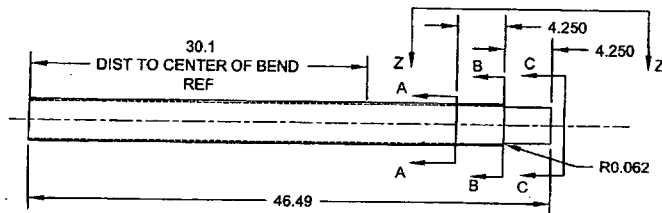
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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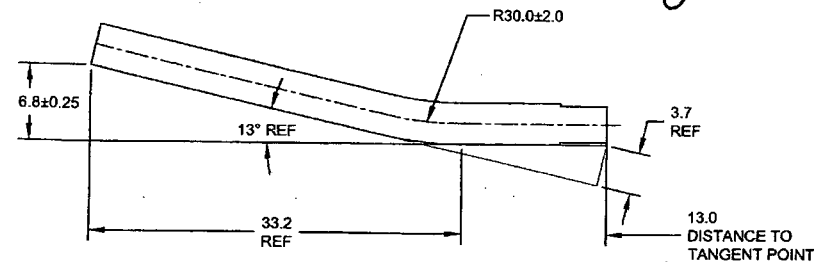
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

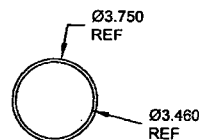
**NOTE:** Date & initial all entries



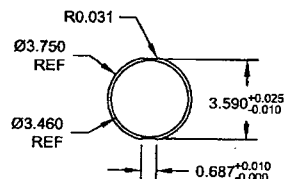
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(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



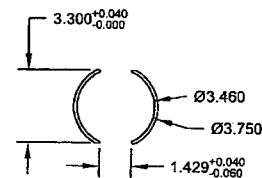
**D3391-011/-021 BENDING DETAIL**  
(MAKE FROM D3391-1)



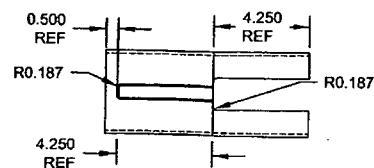
**SECTION A-A**  
SCALE 2X



**SECTION B-B**  
SCALE 2X





**SECTION C-C**  
SCALE 2X



**VIEW Z-Z**  
SCALE 2X

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

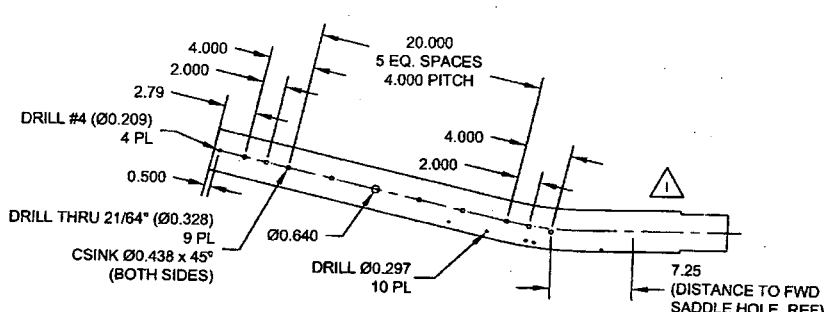
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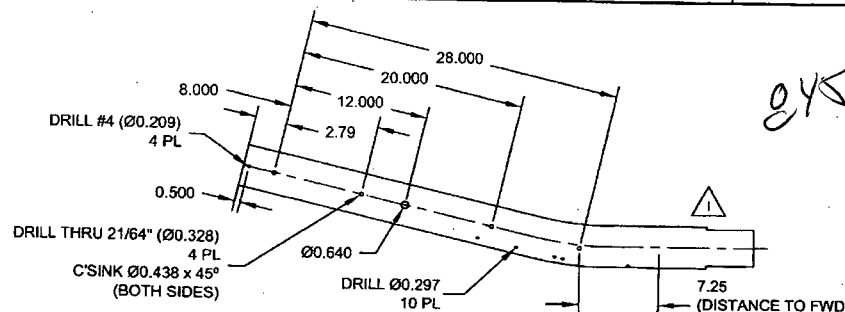
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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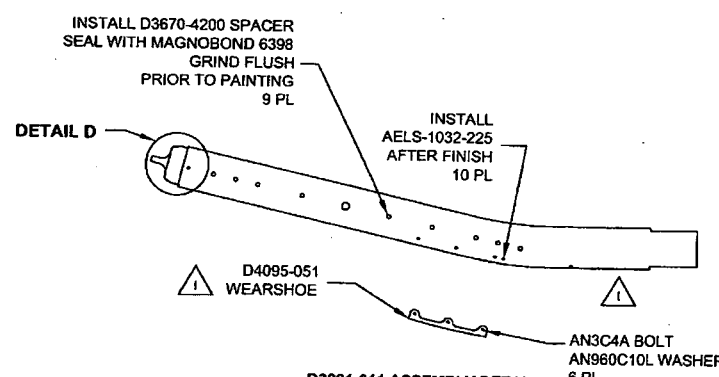
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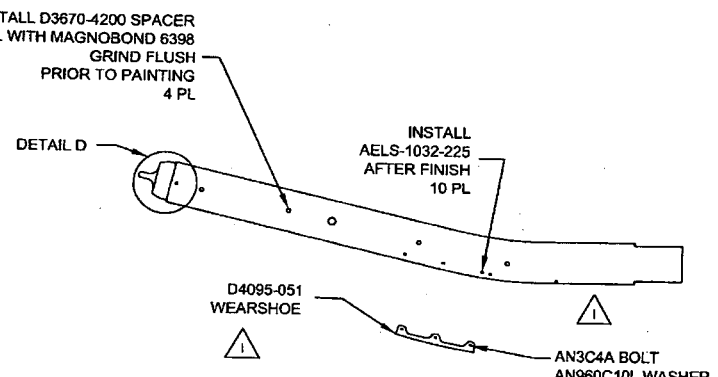
**D3391-011 DRILLING DETAIL**



**D3391-021 DRILLING DETAIL**



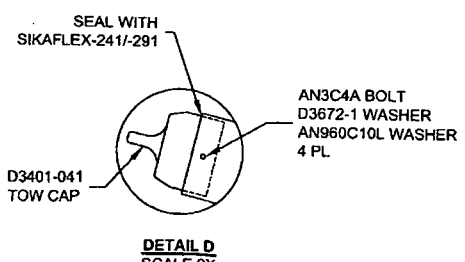
**D3391-011 ASSEMBLY DETAIL**



**D3391-021 ASSEMBLY DETAIL**

**D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST**

QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X	X	D3391-011	FWD TUBE ASSEMBLY
		D3391-021	FWD TUBE ASSEMBLY
1	1	D3401-041	TOW CAP
9	4	D3670-4200	SPACER
4	4	D3672-1	WASHER
1	1	D4095-051	WEARSHOE
1	1	D6013-047	FWD TUBE
10	10	AN3C4A	BOLT
10	10	AN960C10L	WASHER
10	10	AELS-1032-225	INSERT



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CHECKED			DRAWING NO.	REV. 1
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

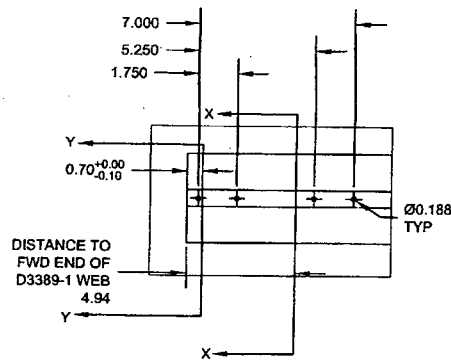
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

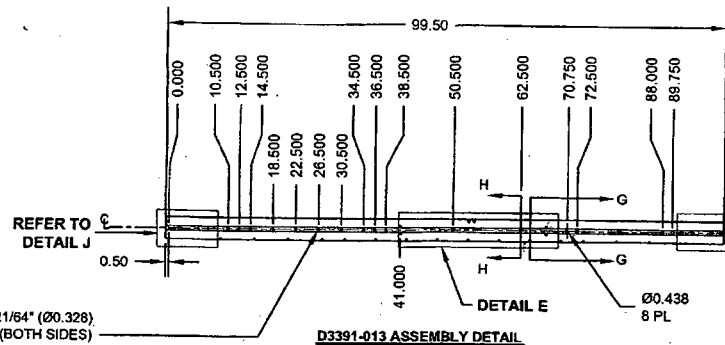


84516

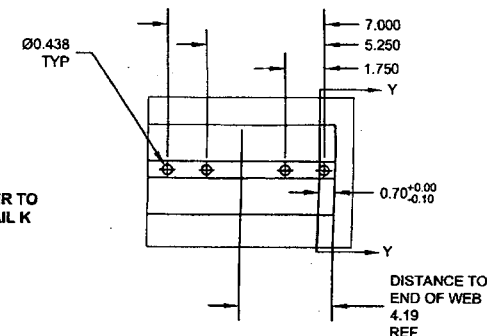


DETAIL J  
SCALE 4X

DRILL THRU 21/64" (Ø0.328)  
CSINK Ø0.438 X 45° (BOTH SIDES)  
12 PL



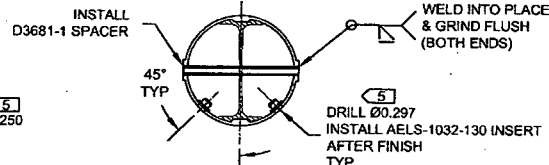
D3391-013 ASSEMBLY DETAIL



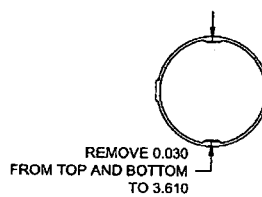
DETAIL K  
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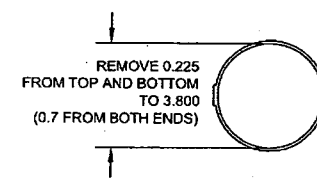
SECTION G-G  
SCALE 5X



SECTION H-H  
SCALE 5X



SECTION X-X  
SCALE 5X



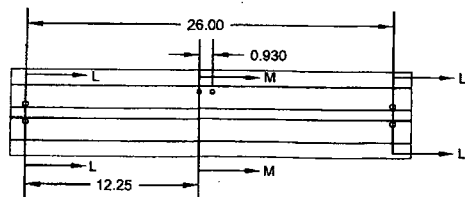
SECTION Y-Y  
SCALE 5X

D3391-013 MID TUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
-013		
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-1	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS4-428-165	INSERT
4	AN960C10L	WASHER
4	AN960C416L	WASHER
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW

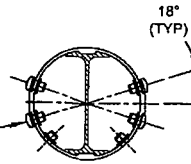
D3391-013 MID TUBE ASSEMBLY

- MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- WELDING: PER DART QSI 004

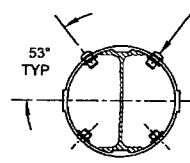


DETAIL E  
SCALE NONE

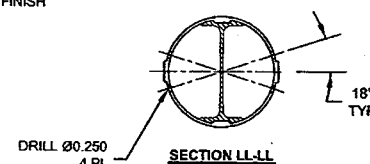
DRILL Ø0.391  
INSTALL ALS4-428-165 INSERT  
MS27039C4-08 SCREW  
D3672-3 WASHER  
AN960C416L WASHER  
AFTER FINISH  
4 PL



SECTION L-L  
SCALE 5X



SECTION M-M  
SCALE 5X



SECTION LL-LL  
SCALE 5X

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2011-11-04

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DRAWN	XDF	
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MFG. APPR.		D3391 SHEET 5 OF 8
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

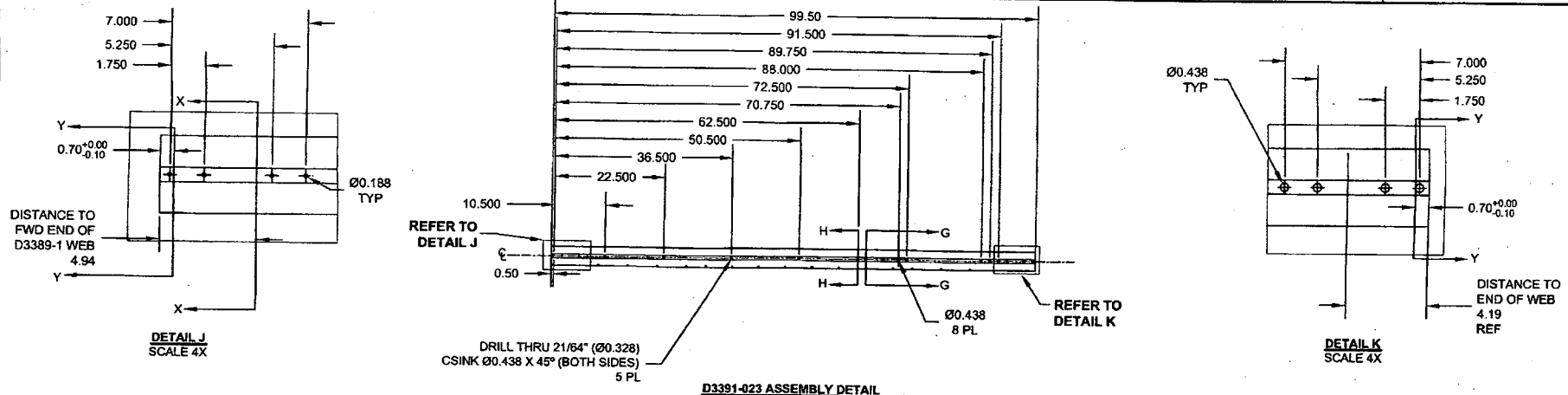
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

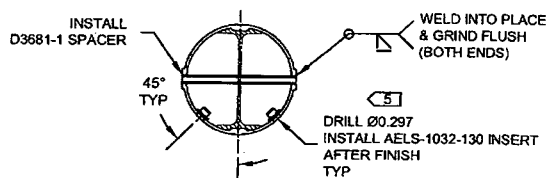
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

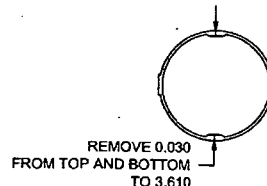
84576



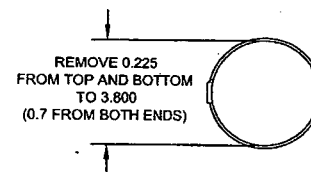
SECTION G-G  
SCALE 5X



SECTION H-H  
SCALE 5X



SECTION X-X  
SCALE 5X



SECTION Y-Y  
SCALE 5X

**D3391-023 MID TUBE ASSEMBLY PARTS LIST**

QTY - 023	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

**D3391-023 MID TUBE ASSEMBLY**

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015
- 3) WELDING: PER DART QSI 004

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2011-11-04

DESIGN	PH	DART AEROSPACE USA, INC KENT, WA
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MFG. APPR.		D3391 SHEET 6 OF 8
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

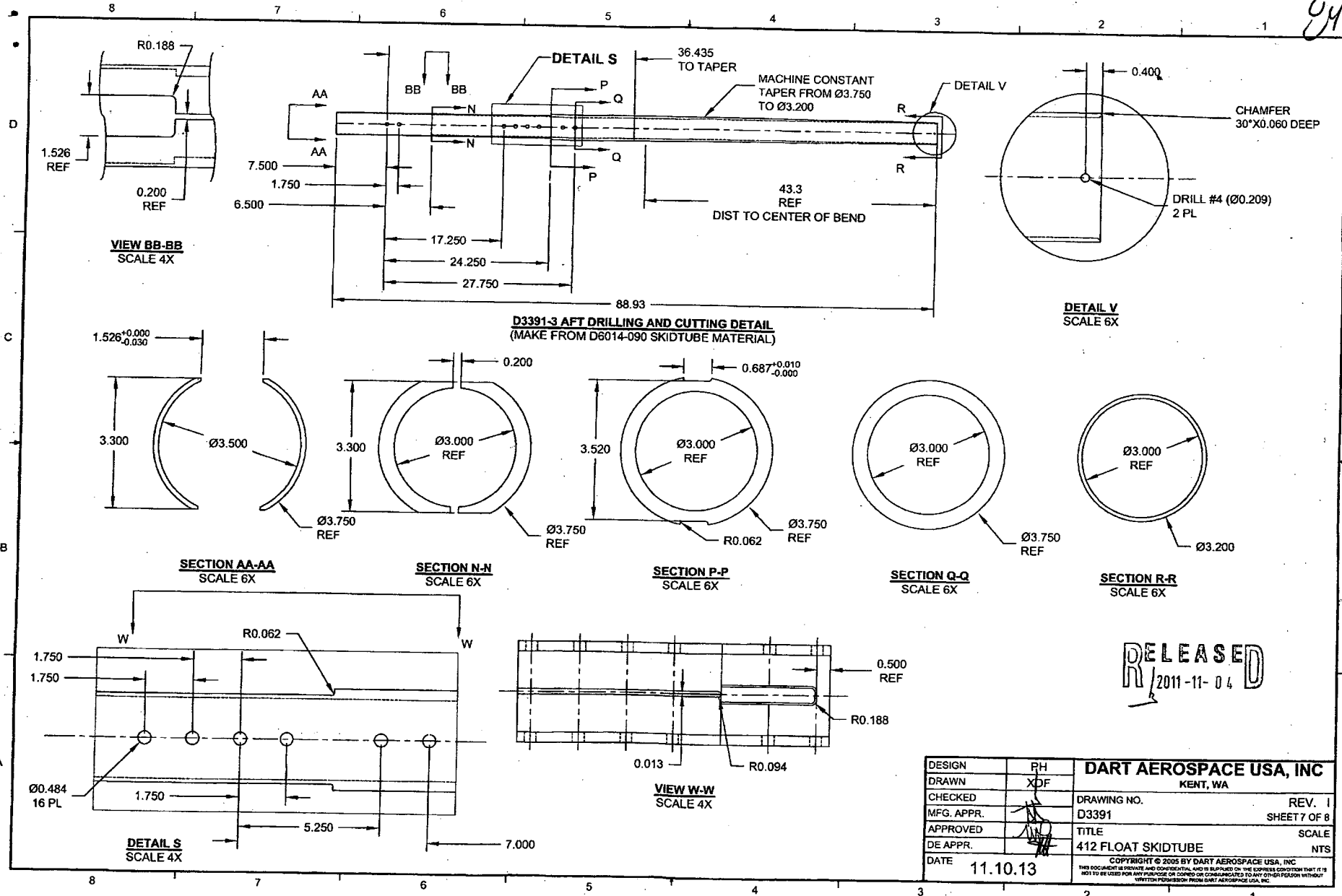
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

945710



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

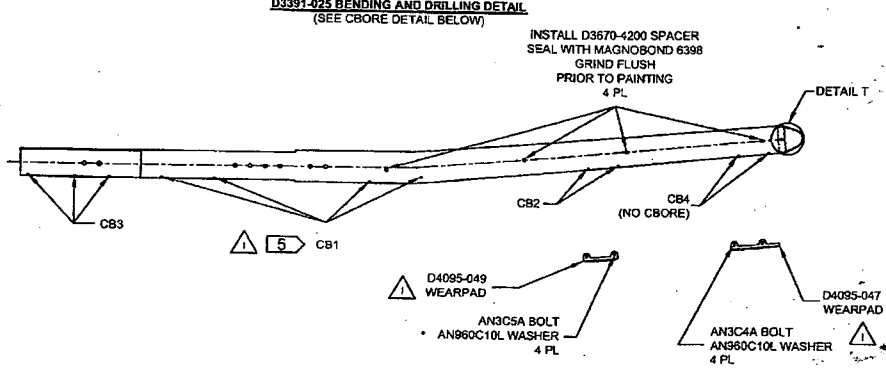
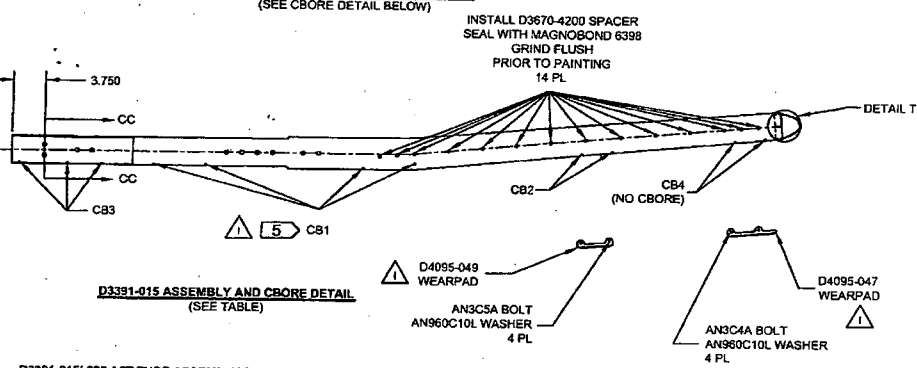
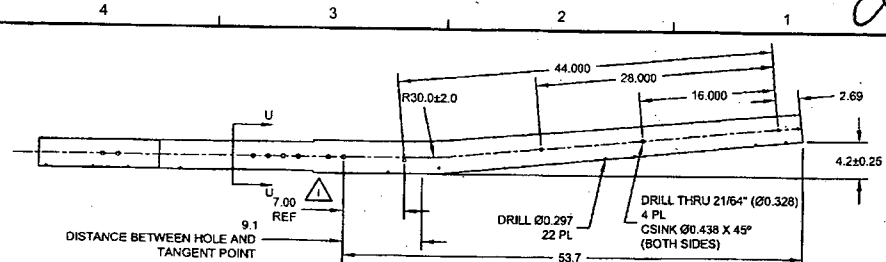
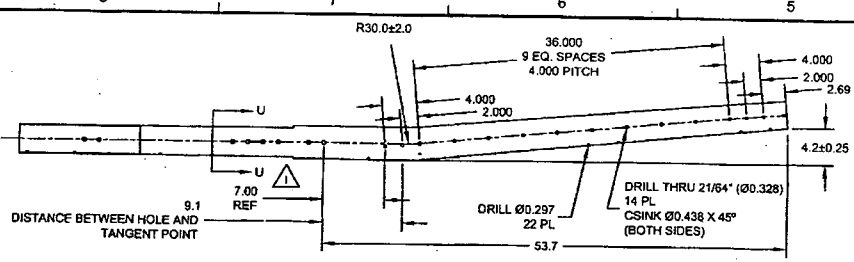
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

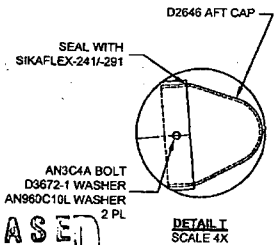
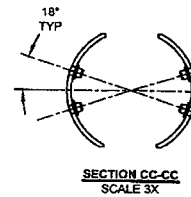
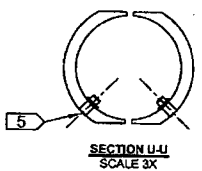
**NOTE:** Date & initial all entries

04576



**D3391-015-025 AFT TUBE ASSEMBLY PARTS LIST**

QTY - 015	QTY - 025	PART NUMBER	DESCRIPTION
X	X	D3391-015	AFT TUBE ASSEMBLY
		D3391-025	AFT TUBE ASSEMBLY
1	1	D2646	AFT CAP
14	4	D3670-4200	SPACER
2	2	D3672-1	WASHER
1	1	D4095-049	WEARPAD
1	1	D4095-047	WEARPAD
1	1	D8014-090	AFT TUBE
14	14	AELS-1032-130	INSERT
8	8	AELS-1032-225	INSERT
4	4	ALS4-428-165	INSERT
6	6	AN3C4A	BOLT
4	4	AN3C5A	BOLT
10	10	AN960C10L	WASHER



RELEASED  
2011-11-04

CBORE HOLES MARKED CB1-CB4 AS FOLLOWS AND INSTALL AELS-1032-XXX AFTER FINISH AS NOTED

HOLES MARKED	QTY D3391-015	QTY D3391-025	CBORE	P/N
CB1	8	8	Ø0.430 X 0.170	AELS-1032-225
CB2	4	4	Ø0.430 X 0.170	AELS-1032-130
CB3	6	6	Ø0.430 X 0.040	AELS-1032-130
CB4	4	4	NONE	AELS-1032-130

DESIGN	PH	<b>DART AEROSPACE USA, INC</b>	
DRAWN	XDF	KENT, WA	
CHECKED		DRAWING NO.	REV. 1
MFG. APPR.		D3391	SHEET 8 OF 8
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



NO. 305

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job #: B371870  
Part #: D3891-013  
Description: Skid tube  
Welding Process: Tig[☒] Mig[ ]  
Base material: Aluminium  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual:	pass[ <input checked="" type="checkbox"/> ]	fail[ ]
Incomplete Penetration:	pass[ <input checked="" type="checkbox"/> ]	fail[ ]
Incomplete Fusion:	pass[ <input checked="" type="checkbox"/> ]	fail[ ]
Cracks:	pass[ <input checked="" type="checkbox"/> ]	fail[ ]
Overlap (cold lap)	pass[ <input checked="" type="checkbox"/> ]	fail[ ]
Undercut:	pass[ <input checked="" type="checkbox"/> ]	fail[ ]
Pin holes:	pass[ <input checked="" type="checkbox"/> ]	fail[ ]
Porosity (surface):	pass[ <input checked="" type="checkbox"/> ]	fail[ ]
Coloration:	pass[ <input checked="" type="checkbox"/> ]	fail[ ]
Burn through:	pass[ <input checked="" type="checkbox"/> ]	fail[ ]

Qualifier Pat. Dyl Date of Test Coupon 12-10-01

Welder Barclay Elliott Date of Test Coupon 12-10-01

The above named individual is qualified in accordance with AWS D17.1.2001 to weld